History of the Pittsburgh Grotto --- Part 1

By Hermine Zotter

(From the Netherworld News: Vol. XX, No. 1, February 1972)

This material is excerpted from the Tenth Anniversary booklet produced by Hermine Zotter. Part 1 of the Grotto History will cover those first ten years, 1947-1957.

Introduction to Caving

Aitkens Cave could be called the beginning of it all. It was August 1946 when Bob Dunn proceeded to his first cave in his 1941 Nash, lead by a young lady who had heard of the cave through relatives. Bob's equipment consisted of a ball of twine, candle and flashlight. His companion preferred to remain at the cave entrance holding the other end of the string. However, it seems Bob braved the darkness for about an hour without the use of the lifesaving twine and departed from the cave quite awed.

About a month later, Bob saw Ralph W. Stone's book "The Caves of Pennsylvania", at Carnegie Library and was surprised to learn that the largest cave in Pennsylvania was practically at his doorstep. He told Dick Hoffmaster, Bob Ruffing and Ray Madsen about the book. Soon they were all studying the picture of Dulaney's Cave and planning a trip.

It was the beginning of their senior year in high school when the four boys started out for their first cave trip together. At the "Post Office" in Dulaney's they met two other cavers, Bob and Lee Fisher, who were on their honeymoon. The group made several more trips that Fall to caves in Western Pennsylvania.

The Birth of the Pittsburgh Grotto

On November 4, 1946, "Life" published an article on the exploration of Grapevine Cave by the Charleston Grotto, NSS. This was the first time the Pittsburgh spelunkers realized that a national organization of cavers existed.

Soon afterwards, the Pittsburgh Post-Gazette published an article on the discovery of Coon Cave near Blairsville by Carl Huttenstein and Sid Cellich from Pittsburgh. This article revealed that there were other cavers in the area. The group set out to locate the cave through the description furnished in the article. They failed. After two more unsuccessful attempts they decided to ask an acquaintance, Dr. Graham Netting of Carnegie Museum, whose name also appeared in the article, for help. It was learned that Dr. Netting was an NSS member and that he had persuaded Carl Huttenstein and Sid Cellich to join. With Dr. Netting's directions, Coon Cave was finally located.

After that, Bob Dunn wrote to the NSS for cave data and information. On March 20, 1947 he received a letter from the NSS Secretary, J.S. Petrie, forwarding not only cave data but also an application blank, a descriptive brochure and a Society membership list. Included was the statement: "Perhaps you would like to organize a grotto?" Further inquiry brought more details and a model Grotto Constitution. NSS President Stephenson suggested a definite assignment of exploration work around Petersburg in order to fill in a blank area on the cave map. By May the Pittsburgh cavers had become NSS members and definitely planned to establish a Pittsburgh Grotto.

Permission to use the Herpetology Laboratory at Carnegie Museum for an organization meeting was obtained and post card notices sent to local NSS members. The first meeting was held on Sunday, October 19, 1947 at 2:25 P.M. The following nine persons were present and constituted the Charter Members:

Norma Lee Fisher

Robert J. Fisher

Richard E. Hoffmaster

J. Robert Dunn

C. Robert Ruffing

Clifford E. Davis

William M. Cellich

Carl L. Huttenstein

M. Graham Netting

Dr. Graham presided and suggested that Bob Dunn act as Secretary, which Bob did. The model constitution for grottoes was adopted.

An Executive Board consisting of the following five were elected: Bob Fisher, Clifford Davis, Dick Hoffmaster, Graham Netting and Bob Dunn. Bob Fisher was elected Chairman and Bob Dunn Secretary-Treasurer. A 25 cent contribution was made by each member to the Treasurer. The Pittsburgh Grotto was in operation!

Progress

The new Grotto continued to hold monthly meetings at Carnegie Museum., and its membership increased steadily. The attendance at the second meeting included, among others, Will Schnarrenberger, John Guilday; the third meeting Allen McCrady and Ed Taylor; the fourth meeting Julia Staniland Day; and by March 1948, forty-five persons were in attendance.

The first trip of the Pittsburgh Grotto was, naturally, to Dulaney's Cave.

In January 1948, it was decided the Grotto's fiscal year should correspond with the calendar year. New elections were therefore held. At the second Board of Governors meeting in March, annual dues were established at one dollar per Grotto member.

By the April meeting, the current field trip procedure was suggested by Dr. Netting; i.e., that weekly field trips be scheduled with a trip leader named for each to organize it. Mimeographed sheets of the field trip schedule began to be published. Heretofore trips were announced by post card.

These flyers could also be called the birth of the Grotto newsletter, although it was Bob Dunn who suggested at the July 1948 Board meeting that the Grotto edit its own publication. This publication was to contain speleological matters as well as the field trip schedule. A Publication Committee was deemed essential to carry on the work of editing and mailing. Dick Hoffmaster was appointed temporary chairman.

Mrs. Staniland (Day) not only was kind enough to place her home completely at the disposal of the Grotto, but also donated a mimeograph machine (which she inherited with the house) and is used to this day (sic).

On August 10, 1948, appeared the Netherworld News, edited by Dick Hoffmaster.

With the publishing of a newsletter, acquiring a headquarters and holding regular meetings, the Grotto made steady progress. The meetings usually had a very social atmosphere with movies, slides and refreshments, but now and then there was present a guest of honor such as Dr. Stone, who gave an illustrated talk on caves and encouraged field work

for the Pennsylvania Survey. The greatest accomplishments of the Pittsburgh Grotto, of course, were in the field.

By late 1950, formal activity began to decline. In 1951, Bob Dunn, Dick Hoffmaster and Allen McCrady were called into the Army and a seemingly inactive period ensued. Bob Riffing was in the Army Reserves and thereby remained to administer the affairs of the Grotto. Several general meetings per year were still held during these lean years. During 1951 and 1952, field trips dropped to one per month, but they picked up again in 1953, and continued to increase steadily.

On August 10, 1952, the Chairman of the NSS Grottoes Committee inquired about the status of the Pittsburgh Grotto. He had not received any semi-annual reports. This was remedied, however, and the report submitted indicated that, even though the Grotto was not very active in so far as formal organization was concerned, its field work, especially the Pennsylvania Survey, was continuing.

The 1950 Recreation Guide to the Pittsburgh Region published by the Allegheny Conference on Community Development contained the following listing: "For information of cave explorations, contact the Pittsburgh Grotto, National Speleological Society, 373 Atlantic Avenue, Pittsburgh 24, Pa."

In March 1954, the Grotto was trying to find new ways to arouse interest in Grotto activities. Dick Hoffmaster contacted some of the newspapers and had notices printed about the general meetings. Allen McCrady contacted the advertising agency of Walker and Downing and asked whether it would be possible to have some of the Grotto members appear on their program "Time Out for Hobbies", a weekly fifteen minute television show dealing with interesting and unusual hobbies. They agreed and Dick and Allen decided to appear on the show March 2. Master of Ceremonies Dick Garret asked general questions such as the public would ask, caving equipment was displayed, and a demonstration given on climbing a cable ladder. As a result letters and post cards were received by the Grotto from people interested in caves.

In October 1954, The Pittsburgh Grotto was asked to investigate the entrance to a legendary passageway near Old Fort Ligonier. This was the first time the Grotto was called upon to render their services to the public. This was a day of digging and examining. Dick Hoffmaster, Bob Ruffing and Bob Dunn discovered a collapsed sinkhole connecting with the exit of the passageway. This shed some light on the legend as it showed a short cut to the outer retrenchments of the fort.

In March 1955, the Grotto experienced a revival, greatly aided by new member William B. White. Activity began to climb to an all time high.

Willy had been an active NSS member since June 1953. First he was a Nittany Grotto member; in March 1954 he helped found the Standing Stone Grotto; and in March 1955 he joined the Pittsburgh Grotto. Actually he came to Pittsburgh in June 1954, but it was not until January that the Pittsburgh Grotto found HIM. Bob Dunn, ever in search for new members, saw his name in the NS change of address list and, according to Willy, came knocking on the door of Mellon Institute asking whether Will was an active spelunker. With an answer of yes, Bob invited him on a field trip.

After a few trips, talk naturally got around to holding meetings and editing a newsletter. Willy obtained permission from Dr. Coleman, who was in charge of the building, to hold monthly Grotto meetings in Mellon Institute. Then he accepted the editorship of the "Netherworld News". His first issue in March 1955 announced a meeting at the Mellon Institute and the Grotto was back in operation again.

Grotto Projects --- The First Ten Years

Mineral and Speleothem Collection

At the second Grotto meeting in November 1947, a Formations and Mineralogy Committee was established with Bob Ruffing as Chairman. It was felt that the acquiring of one speleothem for scientific purposes would prevent numerous individual collections. A fairly extensive collection of identified specimens was assembled by various members,

especially Dick Hoffmaster. Prior to the first anniversary of the Grotto, this collection was assembled and arranged in a display case at the headquarters at 373 S. Atlantic Avenue. In the Spring of 1957 the collection was moved to the new headquarters in the King Estate. The formations were washed, relabeled and arranged in a large display case donated by Ralph Krichbaum.

In early 1953, Marion LeLong performed a cross section study of stalagmites at the Mellon Institute. The project consisted of cutting the stalagmites into cross sections, polishing and mounting them in pin sections so that they could be projected on screens. Color photographs were taken of them, using polarized light with some to show the stress concentrations in the cross section. These cross sections are included in the display.

(Note: With the ever increasing concern over vandalism and the changing attitudes towards collecting, no new formations were added. In 1969, when the Grotto relinquished its offices in the King Estate, the Grotto Mineral and Formation Collection was presented to Carnegie Museum.)

Western Pennsylvania Cave Survey

At the 1950 NSS Convention, the Publications Committee announced that a bulletin devoted to caves of Pennsylvania was planned which would bring up to date Dr. Stone's Bulletin G-3 "Pennsylvania Caves", published in 1932, which listed over a hundred caves.

On April 12 and 14, 1950, letters were received from the NSS President requesting that the Pittsburgh Grotto lay plans for working with the committee and develop material for the bulletin. This was to be accomplished by field work, making maps and collecting fauna. All information was to be sent to Dr. Ralph W. Stone, Chairman of the Pennsylvania Survey.

Since the organization of the Grotto, members had assumed the responsibility of cave reporting as a natural function of the Grotto. However, with the solicitation of the Grotto's assistance, a definite and more organized effort by Bob Dunn, Dick Hoffmaster and Ed Taylor was begun.

The first reconnaissance trip to the McConnellsburg Quadrangle by the above three members plus Bob Ruffing and Allen McCrady resulted in the discovery of seven caves not listed in Bulletin G-3. From then on the field trip schedules included several reconnaissance trips per month.

When Bob Dunn and Dick Hoffmaster entered the service, the survey was carried on by correspondence. Dr. Stone would write to Bob Dunn, Bob Ruffing or Ed Taylor and let them know what specific information was needed, and with a combined effort it would be finished in time. Ed Taylor's specialty was the drawing of many fine maps.

By May 1953, as the survey completion date drew nearer, Dr. Stone offered financial assistance to the Grotto for field trips to gather data.

In December 1953, Bulletin 15 "The American Caver" was published. Therein Dr. Stone expressed appreciation for, and acknowledged the contributions of, Bob Dunn, Dick Hoffmaster, Bob Ruffing and Ed Taylor. They had contributed roughly 1/6 of the cave descriptions, five maps and three photographs. Will White, a Nittany Grotto member at the time, contributed to the description of four caves.

Since publication of Bulletin 15, about sixty additional caves have been reported and the survey continues. In March 1957, the Mid Appalachian Region decided to assist the National in making a complete set of Pennsylvania cave reports for the National Cave Files.

(In later years publications of Caves of Western Pennsylvania have appeared and is nearing a re-publication. The history of these efforts will appear in future installments.)

The 1954 NSS Convention

The annual NSS Convention for 1954 was scheduled to be held in Pittsburgh during April 2, 3, 4. Jack Parker, Convention Chairman, enlisted the aid of Dick Hoffmaster to arrange hotel accommodations and meeting places for the various sessions. The time for making these arrangements was short, but the Grotto managed to get the Hotel Webster Hall as convention headquarters with meetings scheduled at nearby Carnegie Museum and Mellon Institute.

A large, attractive program brochure was printed as well as an informational pamphlet on field trips, which included two location maps of Western Pennsylvania Caves by Ed Taylor. Local cavers made themselves available as field trip leaders and provided transportation to visitors. Good newspaper publicity was received.

In all, it turned out to be the largest and most interesting NSS Convention held up to that time. The NSS NEWS highly praised the Pittsburgh Grotto for the fine work done. It credited the Grotto with having done the most complete job of planning field trips ever experienced at a Convention.

Jones Quarry Cave

Although fragments of bone, later identified by the Smithsonian Institute as Indian, had been found in Jones Quarry Cave as early as 1947 by NSS members, no systematic or professionally directed excavations were made until January of 1955.

At that time, acting upon a tip from James Houck and John Thayer of Baltimore, who had found a large deposit of bones in a portion of the cave not mapped by Davies in "Caves of West Virginia", the Grotto scheduled a trip to the cave. Drs. J. Leroy Kay and Kenneth Doutt of Carnegie Museum accompanied a party of sixteen Pittsburgh cavers to Falling Waters, West Virginia to begin work.

The usual agreement was made with the cave owner limiting access to the NSS and the Museum.

In March, a return trip resulted in the recovery of more bone and the blasting of a new entrance to the cave directly above the burial "crypt".

Eight subsequent trips extending in time to September of 1957 have been made to the cave. All told, the remains of at least eight ancient Indians, ranging from infant to adult, two shell pendants, and one bone gouge have been turned over to Carnegie Museum for their permanent collection.

Dick Hoffmaster, Bob Dunn, Ralph Bossart, Allen McCrady and later Walt Stein have been among the most active workers on this project.

Scientifically the find was of considerable interest, as the occurrence of Indian cave burials east of the Mississippi are rare. Don Dragoo, one of the participating members of the Museum staff, was especially interested in the pathological condition of portions of the bones. (McCrady)

Dulaney's, Hineman and Laurel Creek Cave Movie Attempts

In the summer of 1950, Bob Dunn decided on a film project for the Grotto. In correspondence with Ivan Sanderson, Director of Publicity for the NSS, he received advice on movie selling and publicity. Encouraged by this, Allen McCrady, Dick Hoffmaster and Bob lugged automobile batteries into Dulaney's Cave and Dick wired them into automobile headlamps for lighting purposes. Fifty feet of film was taken on an old 8mm movie camera which turned out quite underexposed.

The second attempt was in Hineman Cave. For this, Dick rebuilt an old motor and made it into a generator. Bob's Jeep was also used. However, the film was not developed and the results were never known.

A third attempt at movie taking was to be done by driving Bob's Jeep into Laurel Creek Cave and using the headlamps for lighting. This also failed due to the Jeep falling into a sinkhole on the way to the cave and being put out of commission. These three movie attempts were, to some degree, experience for the Schoolhouse Movie. More aptly put by Bob Dunn, it was an experience in how not to make a movie.

Schoolhouse Cave Movie

The March 1957 meeting of the Pittsburgh Grotto featured a showing of a movie entitled "Underground Adventure" taken in Schoolhouse Cave, Pendleton County, West Virginia.

During the Grotto's history, several attempts to produce a motion picture were made to show underground exploration. It was decided to make an all out effort at Schoolhouse. On November 12, 1955, a reconnaissance trip showed the project to be feasible. Thanksgiving weekend of that year saw twenty-seven members, the Grotto truck, and masses of equipment gathered at the newly acquired Field House near Seneca Caverns for the project.

Six more trips, innumerable technical problems, 2000 feet of exposed film and a year and a half later, the Grotto was proud to show the film at the April 1957 Convention.

A lot of effort, considerable ingenuity and wholesale cooperation had accomplished the job.

Borrowed equipment included Ralph Bossart's 2.5 KW generator obtained from Monsignor Kushner of Donora, Pa., and 2000 ft. of No. 4 rubber covered cable from NSS member C. N. Bruce of New Castle. Equipment was transported in the Grotto truck and one borrowed from the John B. McCrally Company of Verona, and in Clarence Sandy's trailer.

Of the seven trips necessary, there were never less than ten members and guests, and sometimes as many as thirty.

Bob Dunn devised lighting devices for the work, supervised wiring and, together with Allen McCrady, directed the production. Without Ralph Bossart's know-how and aid the project would have been more difficult. In fact, the entire Grotto contributed in time, money and muscle.

In its present form, the movie needs a few minor changes before it will be ready for reproduction, but the biggest problem has been (and is) the financing of a negative and duplicate prints.

The final print will be approximately 1600 feet in length and will run about twenty minutes. As its title indicates, the film is a pictorial record of an actual trip through Schoolhouse Cave, from the planning stage to the Hodag Room and return. (McCrady).

The National Speleological Society Library

At one of the Mid Appalachian Region meetings in 1955, the Pittsburgh Grotto representatives (Allen McCrady, Bob Dunn and Dick Hoffmaster) informally suggested to the Vice President for Administration of the NSS that the National Headquarters be moved to Pittsburgh and housed at the King Estate. The idea aroused little enthusiasm. At the February 1956 NSS Board Meeting, the Pittsburgh Grotto formally offered the King Estate to the NSS to use as a headquarters. In compromise, the Vice President for Administration, who was in charge of the NSS Library, suggested

moving the library to Pittsburgh. Previous discussion on the matter between Burton Faust and Julia Staniland (Day) had already taken place. Mrs. Day was a certified librarian and had indicated she would take the job as Librarian. It was therefore agreed that she would take the job as Librarian and the Library was transferred to Pittsburgh.

On February 25, Willy White, Ralph Bossart and Jack Leppla drove to Washington D.C. to pick up library material. Three bookcases, a file cabinet and many boxes of books were brought to the King Estate.

A budget was obtained from the NSS to run the Library on a fairly professional level. A Grotto Library Committee, consisting of Allen McCrady, Bob Dunn, Dick Hoffmaster, Willy White and Ralph Bossart evolved to aid the Librarian in the functions and administration of the Library. Supplies for binding and cataloguing were obtained. A book list was completed and distributed at the 1956 Convention. A set of regulations for use of the Library were established.

In Fall, Hermine Zotter and Rita Battisola began to devote weekly sessions to library work. Hermine started a long range project on Grotto publications. Lists of missing issues were prepared and mailed to pertinent Grottoes. The help of all Grottoes was solicited in compiling and indexing complete volumes for binding.

The Librarian's job became Julia Staniland's (Day) in 1956. At about this time the Library had begun to gravitate from the King Estate to the home of Julia at 373 S. Atlantic Avenue where the Library remained until 1969.

The last thirteen year's of this project's history will appear in a later issue.

-End-

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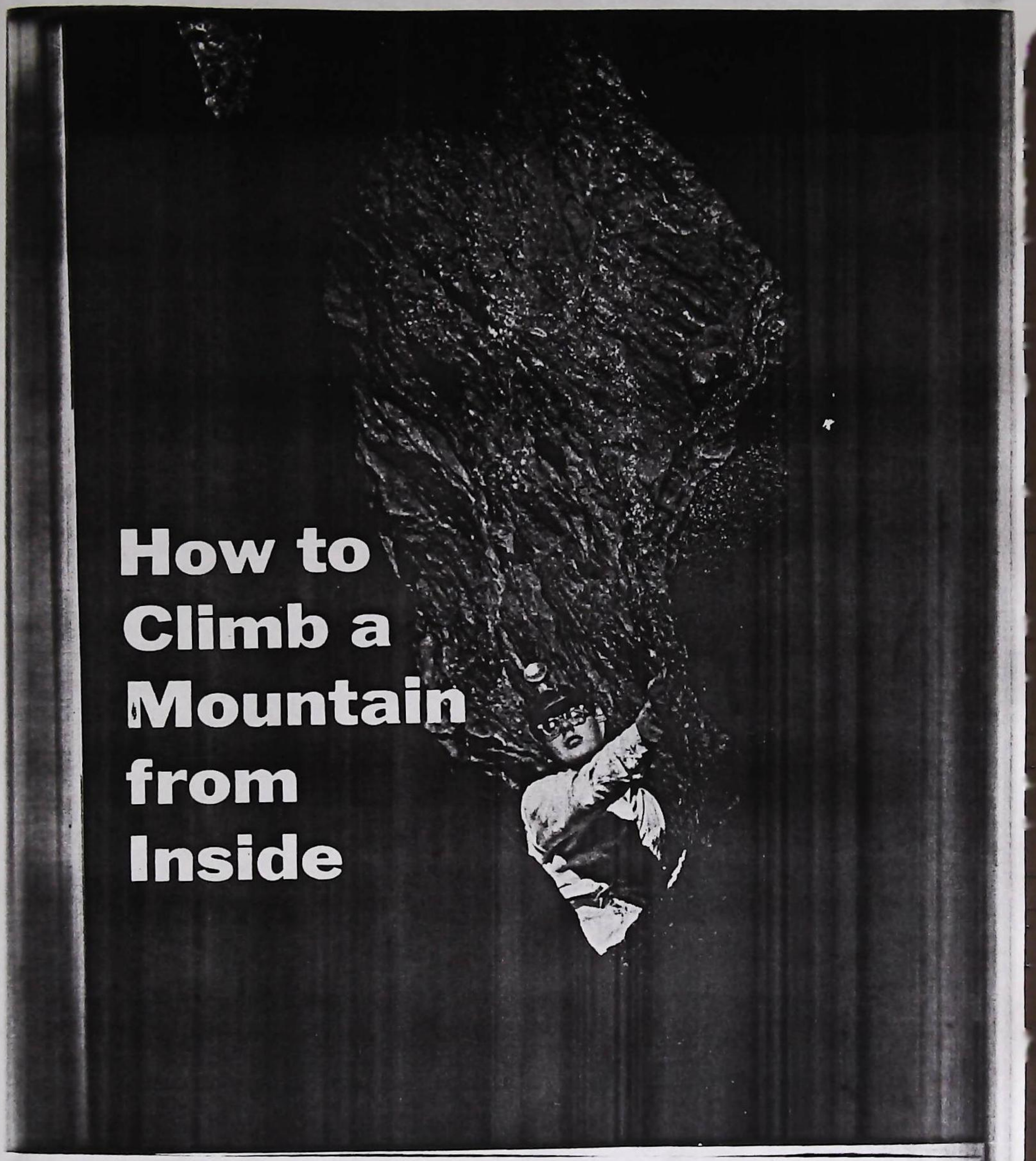

How to
Climb a
Mountain
from
Inside

CAVE EXPLORERS play safe by leaving a message for the outside world, telling where they are going, in case rescue is needed.

By Ernst Behrendt
Photos by Hubert Luckett

IT IS possible to climb a mountain once and never give mountain climbing another thought.

It is impossible to go into a cave once and ever forget it. You are dazzled by the discovery of an unsuspected world under your feet.

Caving is adventure of a special kind. In a way, it is like mountain climbing—climbing a mountain on the inside, you might say. But there is a notable difference. When you reach the top of a mountain, you are "there." The caver has no such tangible goal. He goes on and on

ANCHORING A SAFETY LINE, for extra protection during the descent into Indian Oven Cave, one of the exploring party drives a sharp wedge of specially tempered steel into a rock crevice.

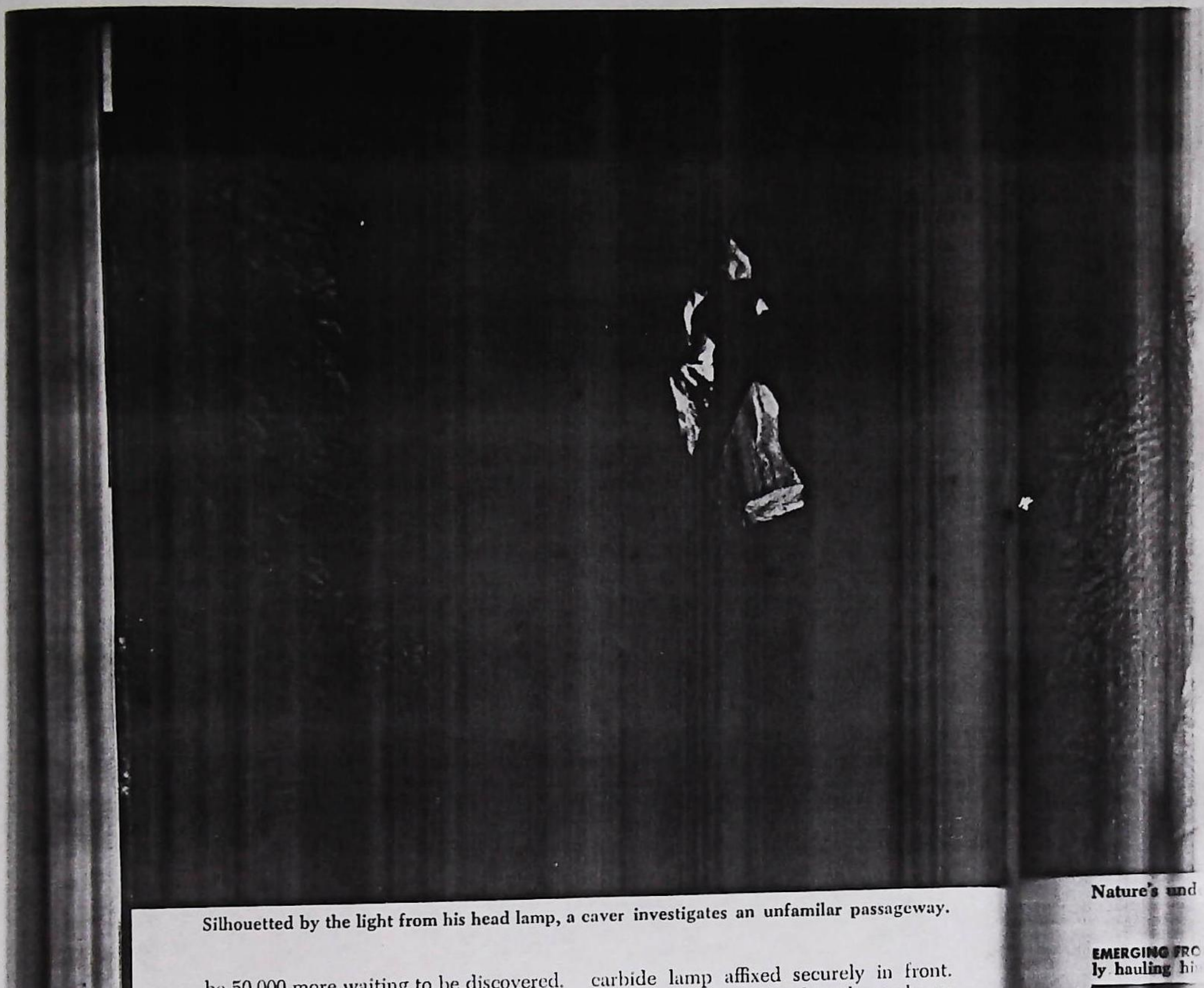
DESCENDING A ROCK FACE, a caver uses his body as a brake while paying out the main rope. The safety line is fastened around his waist.

IN SEARCH OF NEW ADVENTURE, experienced cave explorers rarely pass up a likely looking fissure. It might lead to undiscovered wonders.

as long as he can squeeze through some keyhole passage, crawl down a vertical rock face or even skin-dive to the bottom of an underground lake.

He keeps going because he has a chance to set foot where no man is known to have stood before, to discover an underground cathedral of breathtaking beauty, to photograph lace curtains of frozen rock, to marvel at pools of water so unbelievably clear that they are invisible, to collect animals unknown to science or find traces of men who lived 20,000 years ago. He can even discover a cave of his own. Five thousand American caves are known so far; there may

The first few



Silhouetted by the light from his head lamp, a caver investigates an unfamilar passageway.

be 50,000 more waiting to be discovered.

I recently went with a party into Indian Oven Cave, some 100 miles north of New York City and four miles from the nearest town. There were 20 of us. Ten, including me, had never been in a cave before. The youngest member of our party was a boy of 13, the oldest a man of 60.

Everybody, including the three girls, wore the same sort of outfit: coveralls, heavy boots and gloves, and a miner's helmet with a glaring cyclop's eye of a carbide lamp affixed securely in front.

The cave's entrance lay obscurely on the wooded flank of a mountain. Our leader, Eugene Vehslage, an agile young man with a ponderous title (Chairman of the Metropolitan [N.Y.] Grotto of the National Speleological Society), pointed it out to us. We could have driven along the highway a hundred times without suspecting there was a cave there.

Halfway up the slope of the mountain,

[Continued on page 242]

Nature's und

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[*Continued from page 70*]

there was a farmhouse. One of our party told the farmer where we were bound.

That, we learned, is an elementary precaution when you go "spelunking." You never enter a cave without telling somebody about it. You might want people to know where to look for you.

We left word twice more, to be on the safe side. First, Gene wrote a message on a piece of cardboard, which he then stuck on the windshield of his car after we had climbed out to hike the last half-

Money still talks, of course, but it has to stop and catch its breath more often these days.

—The Sidewalk Superintendent

mile or so through the woods. Later, after we reached the site, someone hoisted a red flannel shirt. This signal meant that a party was inside the cave.

What were we getting into? The cave entrance was both disappointing and rather frightening. Instead of stately pillars of rock flanking a majestic archway, there was a sinkhole—a steep-walled, muddy gulch 30 feet below the forest floor. Into it plunged a picturesque waterfall, but the falls didn't stop there. It dropped right on through a three-by-four-foot crack at the bottom of the sinkhole. *And that crack was the entrance to the cave!*

It was too late for second thoughts. Peter Van Note, second-in-command, was tying a rope to a tree. The rope was to guide us down the sinkhole and beyond. There was a roll call—nobody would be forgotten in the cave.

Then we started sliding down the muddy slope. It was hand-over-hand along the rope down to a slab of rock that formed a kind of threshold.

The rock wobbled. One good, hard kick would send it right into the crack, which it would seal quite efficiently, like a quarter-ton manhole cover.

This possibility was on my mind dur-

[*Continued on page 244*]

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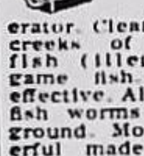

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How to Climb a Mountain from Inside

[Continued from page 242]

ing the astonishing moment when my arms and head were still in the world I knew and the rest of my body wasn't. I was entering another world.

That is, I was trying to. Dangling over dark space, I groped for a foothold. Then my feet touched something solid—the first slippery rung of a natural rock ladder, on which three out of every four rungs seemed to be missing.

There was a small, sloping, boulder-strewn platform 15 feet below the entrance, a passage leading away and around a bend, and then the cave had us.

We stumbled over boulders and sloshed through pools, awed by the eerie,

. . . . . .

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. . . . . .

fascinating rock scenery, sprayed by underground waterfalls.

Suddenly, when I happened to be alone in one of the passageways, my carbide lamp gave out. Instantly I was in total darkness that bore little relation to a night without moon and stars.

A few weeks before, Burton Faust, veteran cave explorer and treasurer of the NSS, had described the effect of darkness in a cave:

"No one who hasn't experienced it before can understand it. You put your hand in front of your face, and a minute later you don't know the hand is there. And when the cave is quiet, you hear your own heart. It sounds like someone running down a cave corridor. Your breathing sounds like wind."

I was immensely grateful for the flashlight, which I snapped on to see my hands again and to find the end of the passage that led to the so-called attic.

Here was a chamber with a sloping, bat-studded ceiling. The bats, hanging head down, seemed tiny—hardly bigger than large, brown butterflies.

[Continued on page 247]

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ASK FOR IT... Kedman Co. 23...

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How to Climb a Mountain from Inside

[Continued from page 244]

There was a deep, round well on one side of the "attic," leading to a brook about 10 feet below. Beyond it lay the narrowest of passageways. A Boy Scout in our party tried to squeeze through; he couldn't, because the ceiling almost met the floor. Yet, for all we knew, an enormous maze might begin right where we thought the old cave ended. We were tantalized by the unsolvable mystery.

Leaning against the dripping walls of the attic, watching the bats stir in their sleep and clouds of cigarette smoke drift past carbide lamps, everybody looked relaxed—but the novices couldn't quite hide their excitement over this utterly new adventure.

WHAT YOU NEED FOR CAVE EXPLORING

A miner's helmet or football helmet, rigged to carry a carbide lamp; heavy gloves; heavy shoes; coveralls; rubber knee pads; two pairs of socks; carbide lamp; flashlight; candles; matches in waterproof container; 7/16" nylon rope for climbing or descending; 5/16" safety line; lightweight nylon emergency rope; first-aid kit; reflecting tape; wire ladder and assorted mountain-climbing gear; water and candy-bar rations.

For more information, membership application blanks and address of nearest grotto, write National Speleological Society, 125 Tapawingo Rd., Vienna, Va.

When we later emerged into the bright forest above, somebody noticed a darkish spot near a birch grove.

It looked like another sinkhole. Some of us were keen to investigate.

We asked Gene Vehslage if he thought it led to a new cave.

"Could be, could be," he said. "But you know the rules. If you find a cave, turn around. Go home and come back with two friends. Better make it three. Then if you get hurt, one of them can stay with you while the other two try to get help."

We decided to leave further exploring to another day. END

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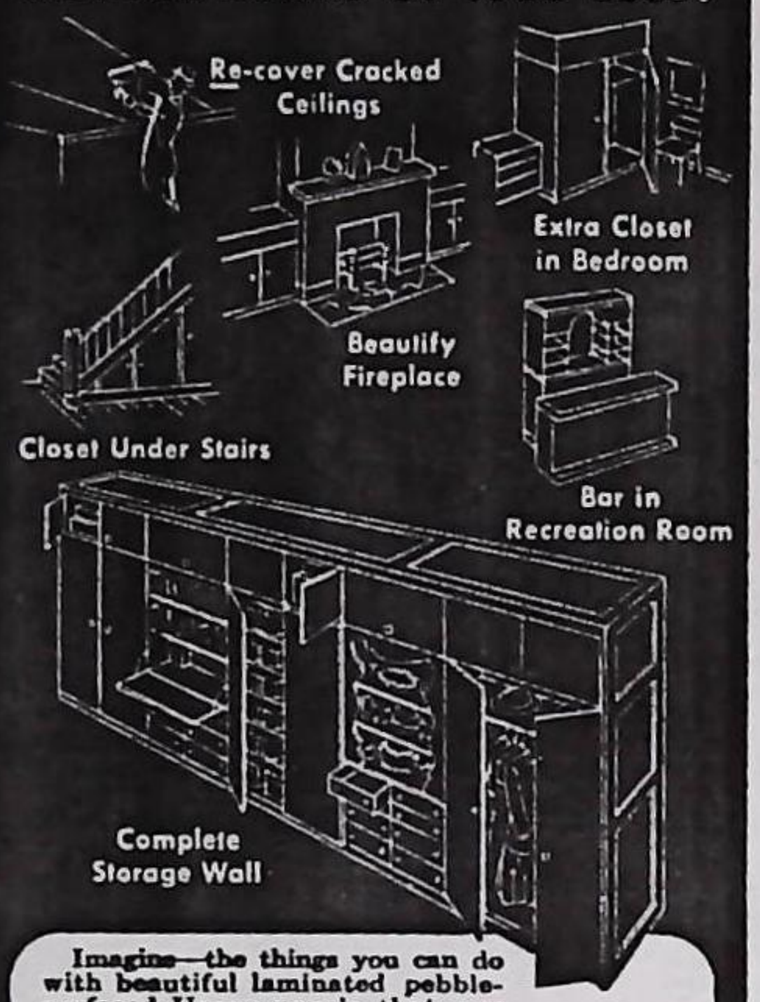

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Takes Spunk To Spelunk

[*Continued from page* 64]

the next day, Loubens used a field telephone to tell his companions above ground that he was ready to come up.

As he was being raised, he laughed and joked. Suddenly, he cried out: "I can't light my torch. I'm under a cascade of water!"

Then came a loud thud. Loubens crashed to the bottom. Volunteers going to his aid soon discovered that he was dead but for nearly a week attempts to bring his body up were frustrated at the risk of other lives. Finally, his body was covered over with a cross made of sheet tin and left underground as an eternal tribute to the strange breed of men who will risk their lives to see what other humans can never see.

If you should ever decide to go cave exploring yourself, there are some fundamental rules you ought to learn. The most important of these is never to enter a cave alone. Always go with at least one other person, so that if something should happen to one, the other can at least help or go for aid.

Last July, for instance, Charles Roger Finley, an 18-year-old youth from Dayton, Ohio, decided to explore Cascade Pit, a dangerous section in West Virginia's Schoolhouse Cave, one of the nation's toughest caves. He was lowered into the cave by his sister and brother. But their rope was too short so they began raising him again. The rope broke. Finley landed more than 200 feet below surface and by the time rescuers reached him, he was dead.

Although there are untold thousands of miles still to be explored in the caves that have already been discovered in practically every state in the Union (except Delaware), discovering a new cave is the ambition of every cave explorer.

It was just plain curiosity that led to discovery of the most spectacular cave of all time —Carlsbad Caverns in New Mexico. Jim White, a cowboy, was out in the desert one day, when suddenly he spied a strange column of thick black smoke rising from out of what appeared to be nowhere.

He galloped over. What he saw gave him the scare of his life. The column of "smoke" turned out to be a steady stream of millions of bats, flying out of a cave for their pre-dark flight for food.

Cowboy White investigated and eventually became the foreman of mining operations that were set up to remove bat guano. More than $5,000,000 worth of the stuff was removed. Today, Carlsbad Caverns is one of the world's most famous tourist attractions.

Real cave discoveries, however, can be

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...Charles Rogers ...youth from Dayton, ...Colorado Fit, a dis... ...Explorer's Schools ...toughest caves. He ...by his sister and ...too short an ...This rope broke ...200 feet below ...reached him, he ...

...thousands of ...in the caves that ...covered in practically ...National Parks ...

made by studying topographical maps and hunting around areas where caves are bound to have been formed over the years.

"Most caves are formed in limestone areas," says Howard Sloan, a New York publisher and one of the most ardent cave explorers in the country. "You can get a map from your state geological office. These maps will show limestone and other natural areas in which caves are formed. Then you go into the area itself and look around for such things as streams running into the ground and sink holes. A sink hole is a depression in the ground, perhaps the result of land collapsing into an underground cavern.

"If there's a cave around, its entrance may be no bigger than a hole big enough for a rabbit to crawl through. Then you start digging."

A member of the Northern New Jersey Grotto and membership director of the National Speleological Society, Mr. Sloan apparently knows what he is talking about. Last year, only six caves were known in New Jersey. Today, thanks to the exploration work of Mr. Sloan and his grotto, there are some 56 caves on the New Jersey map.

Anyone interested in joining or starting a cave-exploring grotto, Mr. Sloan says, can write to him at 425 West 25 Street, New York, N. Y. The society issues publications and booklets that help beginners.

Of course, if you find a cave, there's actually no telling what you'll find in it. Often you can pick up items of historical interest which can be sold to museums or collectors. Mr. Sloan says members of his grotto are always coming across Indian relics.

And early this year the Secretary of the Interior ruled that bat guano is a mineral "analogous to phosphate," and therefore much more valuable than heretofore believed. Anyone who explores on government property and discovers a cave loaded with bat guano is now entitled to a lease for getting the rich mineral deposit out. The leases will be issued through the Interior Department's Bureau of Small Land Management. But the caves have to be discovered first.

There are many rumors concerning pirates and thieves who used American caves in hills and along the seacoasts to hide fabulous fortunes and treasures. This aspect of cave exploring, some speleologists feel, is a long neglected one.

It takes spunk to spelunk, but the rewards—both aesthetic and monetary—can make it worth all the trouble. And there's the added compensation of knowing that you're pioneering what is probably the last frontier for adventure in America. •

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MAGAZINE: MECHANIX ILLUSTRATED
DATE: MARCH 1953
VOLUME 42, NUMBER 6

MECHANIX ILLUSTRATED

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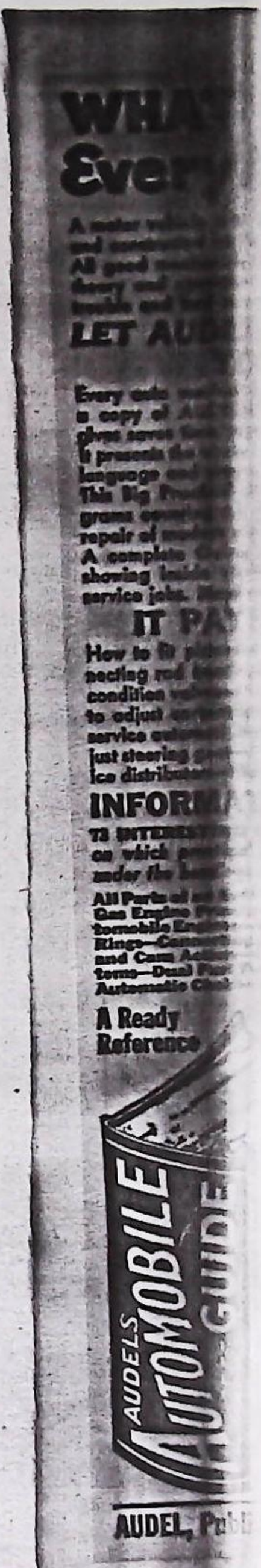
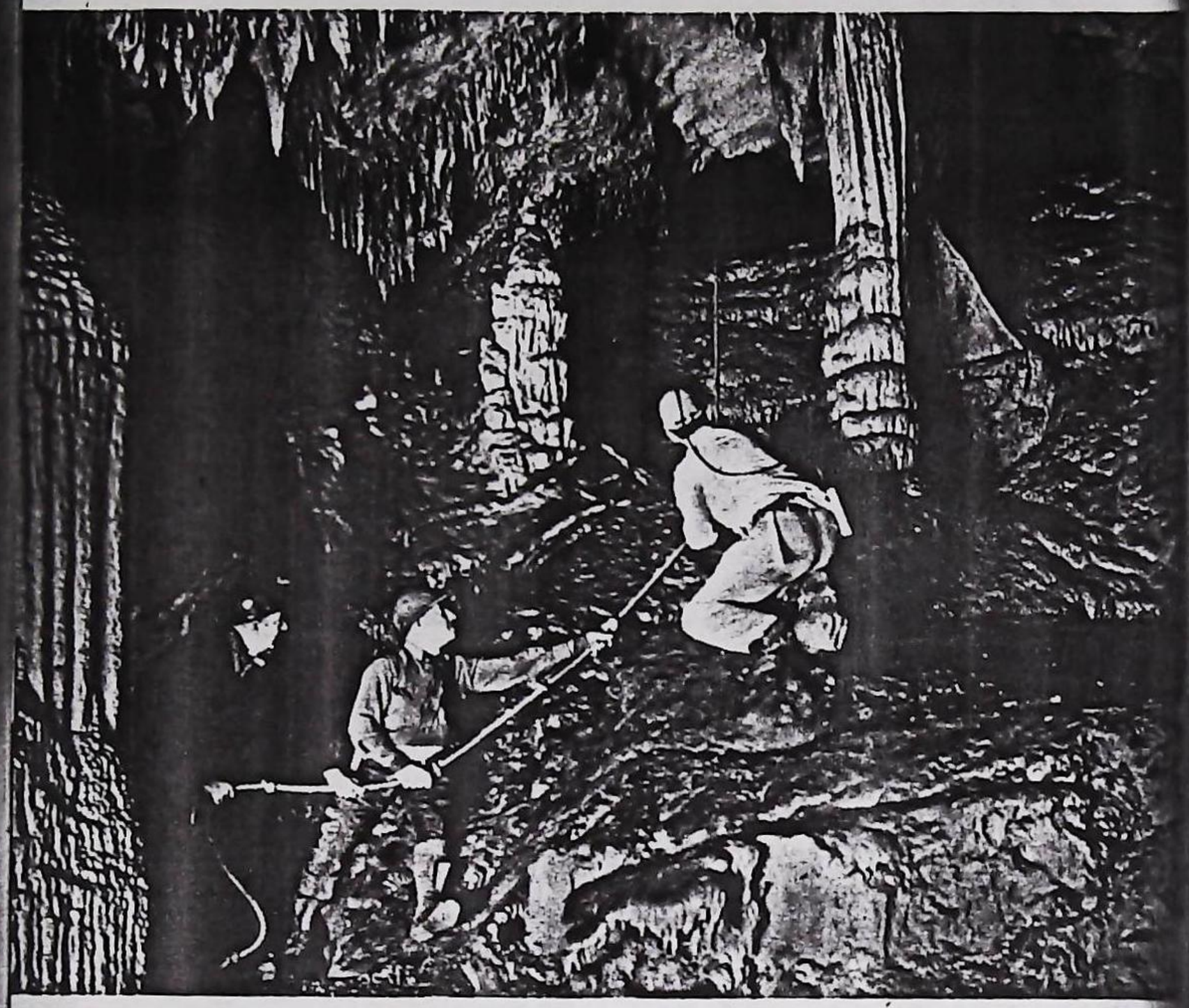


It Takes Spunk To Spelunk



NOT long ago a couple of engineers were drilling an artesian well in Alabama. Everything was going along in routine fashion until the first gush of water shot up, bringing with it a startling creature—a pink fish, six inches long and without eyes! The engineers had tapped the bottom of an unknown cave.

To several thousand 20th-century American cavemen, such odd discoveries are nothing new. These spelunkers, as they call themselves, are part of the growing roster of men and women—from famous scientists to high school girls—who are spending their free time meeting the challenge of exploring and discovering caves.

Through mysterious passageways, sometimes hundreds of feet below the earth's surface, weird formations stretch miles underground. In these lie the most astonishing and breath-taking curiosities known in the world of nature. There are amazing pre-historic formations. There are rare and precious minerals. There are blind fish and blind salamanders. There are strange remains—and sometimes even fortunes!

Out in Grand Canyon country, for instance, two young men, Murl Emery and

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Cave exploration is one of the last frontiers for adventure in America.

By Hugh Kingsley

Drill hole from surface provides spelunkers, above, with underground food supply. Below, Captain Cowling, who lead expedition into Virginia's Endless Caverns, catches subterranean eyeless shrimp.

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Murl Emery and

Harold Carpenter, were skippering a boat along the turbulent Colorado River gorge when they spotted bats flying out of a hole 800 feet up one of the steep canyon walls.

They pulled their boat alongside the shoreline, just beneath the hole, and Carpenter volunteered to investigate. Up the stony cliff he went, inching his way hand over hand. Finally, he got to a point where he could throw a rope over a cluster of rocks that hung over the gaping hole. Crawling up the rope, from which a slip would have meant certain death against sharp rocks below, he slid into the cave mouth and flashed a light onto the floor.

Thin shafts of rays from his flashlight penetrated the darkness and disclosed a peculiar blanket of black-brown dust covering the cave floor. He climbed down and excitedly reported his find to Emery. Both agreed it was bat guano, highly valued as a nitrogen-rich fertilizer. There were probably tons of the stuff that had taken thousands of years and millions of bats to accumulate.

"Good as gold," said Emery. "Let's work it out of there and cash in."

First they got a permit from the National Park Service. Then they got financial backing for equipment, such as a sack-loading chute, an aerial tram and a diesel generator.

They were soon able to deliver 300 tons a month and the going market price is between $45 and $75 a ton. One test hole showed at least 2,500 tons in a single portion of the cave. Now, their strange fortune is said to be high in the six-figure category.

This sort of thing happens to other people, too. A couple of years ago near Pasadena, Calif., Adolph Schleicher found a cave containing bat guano valued at $500,000. As if that weren't enough reward for one man's interest in caves, an atomic blast last year in Nevada added to it. The blast started an earthslide that opened up another chamber of the same cave. This turned out to be bigger and richer in guano than the first one.

According to Ivan Sanderson, vice president of the National Speleological Society of America, a jaw-breaking title for organized amateur and scientific cave explorers, there are an estimated 50,000 caves in America. But only about 10 per cent of these have been found.

Cave exploring is a relatively new sport in America. The Speleological Society itself didn't get organized until 1939 and the spelunking boom got underway shortly after World War II. Now some 4,000 men and women, through local chapters called "grottoes," are on the Association's list.

If you're lucky enough to find a cave on your own property, or on property you can buy, there's no telling what use you can make of it. There are now 146 members of the Association who operate caves commercially as tourist attractions. "The cave business," says Mr. Sanderson, "is a multi-million dollar one."

Perhaps one of the most outstanding examples of a cave turned commercial by an amateur cave explorer is the one run by 27-year-old attractive brunette, Lydia Neubuck, at Pottersville, N. Y. The 423rd member to join the National Speleological

France-Belgium exploration group recently made first descent into the Pierre St. Martin Cave in the Pyrenees and claimed world's record for straight-down descent—1,968 feet. Group at left starts lowering spelunker Lepineux, right.

Society, Lydia, once named "Miss Cave-woman of the Year," left school to commercialize a cave in 1949. She got a group of school-children to help her clean out a water-filled tunnel and now offers tourists a chance to swim underground in the cave. Last year thousands of men, women and children paid admission rates (75 cents for adults and 35 cents for children) to go through her Natural Stone Bridge Caves. Lydia herself has been through just about every cave in the U. S. and calls it "the most thrilling sport in America."

Caves are important in the nation's defense program, too. The Army and the Navy, for instance, are constantly on the lookout for suitable caves which can be used for storing vital equipment. They fix up the caves and, naturally, keep the locations top secret.

Out near Atchison, Kans., the Department of Agriculture uses a 14-acre underground cave chamber for storing such surplus foods as 16,000,000 pounds of dried eggs. Like most caves, the storehouse is found to maintain a year-round even cool temperature. The Department pays $20,000 a year for the lease rights.

When Mammoth Cave in Kentucky developed a world-wide reputation attracting tourists by the thousands Uncle Sam offered to take it over as a National Park. The owner was offered $283,000 but he held out for $500,000. The government is now raking in over $1,000,000 a year from admission fees.

At Bella Vista, Ark., one man turned a cave into an underground nightclub called Wonderland Cave, and people flock to it from miles around. Part of it is also used as a chapel for religious services and another part for tourists who pay just to look around.

As an adventure-packed pastime capable of testing courage and skill, few sports exceed the thrills and magical attraction of cave exploring. Although with modern equipment and ordinary precautions cave fatalities are fewer than one for every billion hours of cave exploring, a cave accident invariably becomes a spectacle for sensational headlines around the world.

One of the earliest cave tragedies involved a man named Floyd Collins in 1925. Trapped under tons of rocks and sand in a Kentucky cave, thousands of people spent a small fortune trying to rescue him. The whole world seemed to stop just for news of the rescue operations. Unfortunately, Collins died of pneumonia while rescuers were about to reach him. Books, movies, songs and even poems were written about him.

The latest cave adventure to attract world-wide attention took place in the summer of 1951, 1,000 feet underground near the little village of Ste. Engrace in the French Pyrenees. Three men—Marcel Loubens, a small businessman; Max Cosyns, a Belgian physicist; and Norbert Casteret, considered the father of modern cave exploration—decided to investigate the deepest natural cave ever discovered by man.

Loubens went down first. Inch by inch he was lowered on a steel winch until he hit the floor of a pitch black chamber. He spent a whole day and night exploring an underground stream that ran through the cave. At 9 a.m. [*Continued on page* 170]

MAGAZINE: MECHANIX ILLUSTRATED
DATE: SEPTEMBER 1950
VOLUME 43, NUMBER 5

It's a Pet-Crazy World

People are taking all sorts of bloodthirsty beasts into their parlors these days—from aardvarks to zebras.

By West Peterson

MR. Midnight made his first public appearance on New Year's Eve at the stroke of 12. Mrs. Ella Rausch was having a few friends in her home to celebrate in traditional fashion when suddenly the ladies screamed and the men fervently vowed to take the pledge. Mr. Midnight—a real Caruso of a mouse—ran into the middle of the room, sat up on his hind legs and began to sing!

"Why, he sounds just like a canary!" exclaimed Mrs. Rausch, stepping off the chair into which she'd leaped. "I do declare, he's a *singing* mouse!"

And so he was. By some freak of nature this little rodent had the vocal cords of a star of "stage, screen and radio." He had the instincts of a ham, too, or else why would he choose New Year's Eve as the occasion for his debut?

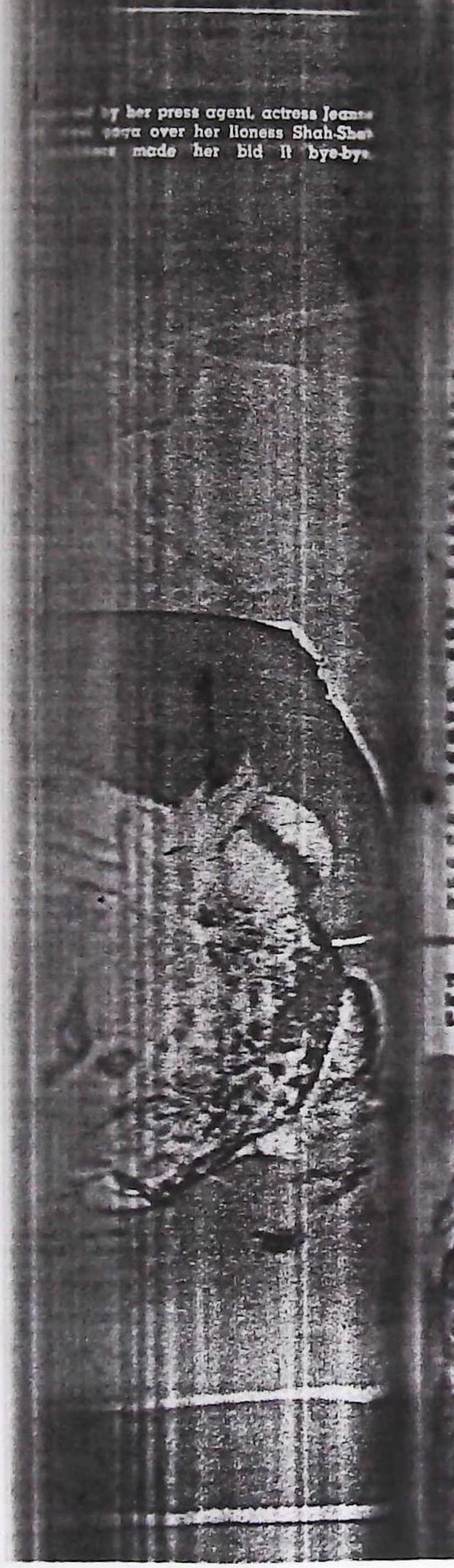
Mr. Midnight took a few bows after making like a canary, but refused to be captured. Later, however, a succulent hunk of Camembert lured him into a cage and it wasn't long before his singing paid for his keep.

Mr. Midnight traveled from Iowa to New York City, chaperoned by Mrs. Rausch, to chirp merrily on the We, the People radio and TV show. At least one movie studio is interested in him, and—who knows, some day he may have as many shrieking feminine fans as Bing Crosby and Ezio Pinza put together!

But, as pets go, a singing mouse can't claim any title for uniqueness. People in this pet-crazy world take all sorts of creatures into their parlors.

Once there was a lion named Scimitar, for instance, who sat at the table with his master and slept at the foot of his bed. The owner was Caracalla, Emperor of the Roman Empire! King Francis I of France also kept a lion as a pet, often using the beast to scare noblemen who were delinquent in their tax payments!

More recently, movie star Jeanne Crain was gaga over Shah-Shah—a lion given her by a fan. The animal came to her as a cub and required bottle feeding. After a couple of years it was still as tame and friendly as a kitten, but weighed more than Jeanne.



This 65-pound lion, pet of George H. Westbeau, loves his master so much he could eat him up. Luckily, he's just kissing him, it says here.

Two-year-old Sharon Ann Reed plays with her ten-month-old bear cub Snooky. The animal will be kept only till he starts hugging too tightly.

As reported by her press agent, actress Jeanne Crain went gaga over her lioness Shah-Shah till neighbors made her bid it bye-bye

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...rth to three cubs! We'll bill ...od, of course."

...ke, like China Boy, contrib... owner's exchequer instead of ... This bantam rooster plays an ... in a magic show put on by ... Lizzka Raymond. He struts ... when called, does a little ... designated cards out of a

...Manhattan hotel apartment ...nd and her magician-author ... B. Gibson, China Boy ... roost. He pushes open doors ... and feathered feet and if his ... dressed to go out, he makes ... wants to go along. Often he ... Avenue or Broadway with

...k-eared marmoset Skippy ... shoulder during his TV pro... ...dly creature when healthy.

...d skunk owners claim their deodorized pets ...st dogs and cats as companions. Here, Roland ...is of Philadelphia plays with his polecat.

The Shanghai-born cock, now aged four, ...rows at 6:30 every morning but other ...ests in the hotel are used to it and make ...o complaints. To date, he's had no love ...e; on a visit to a farm last summer he took ...a snooty attitude toward hens who know ...othing except how to scratch for corn and ...ay eggs.

China Boy slumbers on a pillow and dines ...n Chinese millet, lobster, fresh fruit, let...ce, brown rice and corn-on-the-cob with ...lenty of butter.

Another notable addicted to the compan...nship of fine-feathered friends is Ray...mond Loewy, the industrial designer. At ...is vacation chateau outside Paris he once ...ept a peacock named Leon who was un...disputed dictator over the dogs, ducks and ...chickens in the courtyard.

When it comes to eating, this young lady, right, ...akes a pig of herself. Yes, Susie's really a ...wine. Here, mistress Eunice Latham feeds her.

Pink pythons are the playmates of six-year-old Jacqueline Vaissieres of Paris, France. She appears with the snakes in a Montmarte sideshow.

Leon was every bit as vain as peacocks are supposed to be. When Loewy brought guests to the villa, he would fan out his brilliant tail feathers to a full two-and-one-half-foot spread and parade like a drum major. One day he saw a reflection of himself in the hub cap of a motorcar. The idea that he had a rival on the premises drove him into a frenzy of rage. He attacked the hub cap image ferociously until his beak was battered and they had to drag him away.

Old age caught up with Leon not long ago and he was given a burial befitting his dignity. Now Loewy plans to get two peacocks to replace him, a mama-and-papa combination to be called Leon II and Leona.

The sky's the [*Continued on page* 179]

Nobody really knows the age of Big Boy, the turtle, but the estimates are in hundreds. Here Ronnie Sharum feeds him his favorite food—a carrot.

Alligator pair named Joe and Josie grew so big that owner Ed Weinhold had to give them to a zoo. Here, 200 pound Joe is taking his last ride.

Satin, the sea lion, was found dying on the California beach by Mrs. Ruby Bigelow. She nursed him back to health and now he won't return to the sea.

...skunk owners claim ... dogs and cats as companions ... of Philadelphia plays ...

Neighbors didn't like the idea of having the jungle beast around. They seemed to think Shah-Shah might swear off beefsteak and start eating their offspring. So, complaints to the police finally resulted in Jeanne's tearful donation of the lion to a Hollywood zoo.

Another movie star, the late Ted Healy, wasn't as lucky. When neighbors complained about his pet lion, he couldn't find a zoo that would accept it and had to have it boarded at a private home for animals. The grocery bills were terrific. One day the superintendent of the place phoned Healy to say he had good news.

"You mean my lion finally died?" asked the actor, thinking of his beatup bank account.

"No," was the answer. "She's doing fine after giving birth to three cubs! We'll bill you for their food, of course."

Some odd pets, like China Boy, contribute to their owner's exchequer instead of draining it. This bantam rooster plays an important role in a magic show put on by his mistress, Litzka Raymond. He struts across the stage when called, does a little dance, and picks designated cards out of a deck.

Around the Manhattan hotel apartment of Miss Raymond and her magician-author husband, Walter B. Gibson, China Boy really rules the roost. He pushes open doors with his head and feathered feet and if his mistress gets dressed to go out, he makes signs that he wants to go along. Often he strolls up Park Avenue or Broadway with her.

The Shanghai-born cock, ... crows at 6:30 every morn... guests in the hotel are used ... no complaints. To date, he's ... life; on a visit to a farm last ... a snooty attitude toward ... nothing except how to scratch ... lay eggs.

China Boy slumbers on a p... on Chinese millet, lobster, ... rice, brown rice and corn-... plenty of butter.

Another notable addicted ... friendship of fine-feathered ... Raymond Loewy, the industrial ... his vacation chateau outside ... kept a peacock named Leon ... disputed dictator over the ... chickens in the courtyard.

Deer Lucy drops in for breakfast every morning at the Harvey Blue farm at Dale, Wisc. The eight-month-old doe spends the morning in the house.

Ivan Sanderson's black-eared marmoset Skippy rides around on his shoulder during his TV program. Skippy's a friendly creature when healthy.

When it comes to eating, this y... makes a pig of herself. Yes, ... swine. Here, mistress Eunice L...

d Lawns

[from page 136]

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... the other with hives."

It's A Pet-Crazy World

[Continued from page 71]

limit so far as pet oddities are concerned. Animals who become the objects of man's affection run all the way down the list from aardvark to zebra. Some people, believe it or not, even like to coddle snakes!

Psychologists have an explanation. Humans' age-old craving for the company of animals is due to the fact that they like to feel that lesser creatures are dependent upon them. They want something to love, to care for. In children, particularly, this need is carried to extremes, like the little girl who kept a clam in a dishpan and christened it Edith!

But, it's simpler to say that keeping pets is fun. There's fascination in observing their daily habits. And friendship with an animal, fish, reptile or bird isn't spoiled by backtalk, unless of course the captive pal is a parrot or a mynah bird.

Aside from dogs, cats and parrots, the pet rooster includes cheetahs, chimpanzees, monkeys of every description, rattlesnakes, boa constrictors, cottonmouths, pythons, skunks, rabbits, squirrels, salamanders, turtles, frogs, toads, opossums, raccoons, tigers, leopards, jaguars, elephants, alligators, chameleons, ocelots, deer, bear cubs, llamas, hamsters, cockroaches . . . shall we go on?

There was once a man in New Jersey who even gave his hospitality to a hyena, the most hostile of all beasts. Kept it for a couple of years, too; but then the animal turned vicious and had to be put behind the bars of a zoo.

Largest dealer in pet oddities in the United States is the Trefflich Bird and Animal Company of New York City. Asked about the most unusual critter he ever sold as a household companion, owner Henry Trefflich had a prompt reply.

"A hunting leopard, commonly known as the cheetah," he said. "A society lady paid good money for it. She put it on a leash and walked it down Fifth Avenue in the Easter parade."

Needless to say, the matronly exhibitionist's pet was a cub and she soon got rid of it. But Trefflich sold another cheetah to a Texas oil man who kept it around his home even after it reached a six-foot length and tipped the scales at 150 pounds. Associating only with kindly humans, the animal stayed perfectly tame.

Monkeys, claims Trefflich, are very popular as pets all over the world—a fact which inspired his firm's motto: "A monkey in every home."

Because they are the playboys of the animal kingdom, monkeys are always good for

[Continued on page 183]

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[from page 180]

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If a valuable shade tree e desired line of the fence, nd it. This might be made provide a shady garden

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ued from page 174]

ecause the tube draws only 50 0 thousandths of an ampere) left on for an hour at a time, ent damage to the batteries. receiver illustrated, a flash-ted for more than three weeks operations; the "B" was still and probably will be service-l months.
uild this little receiver for the rience it furnishes will un-e in to ask, "Can another tube ke it louder?" Yes, it can, but is to be enlarged the sensible to discard the batteries and ower pack, which can furnish ted current for a dozen or ers. Individual batteries are eral sets of them cost more than r unit which lasts indefinitely. have to be replaced by an AC es are inexpensive enough to change.—*Robert Hertzberg.*

It's A Pet-Crazy World

[Continued from page 179]

laughs. They make lively and intelligent pets who fully reciprocate the affection given them. But they can also raise the devil in the way of mischief, and they become cantankerous in old age. As a rule, too, monkeys don't like children.

Trefflich sells about two "deodorized" skunks per month. "They tame down like cats," he says. A few years ago he sold a chimpanzee to Gilbert Kahn, the banker. Kahn returned it to him when he got married and went on his honeymoon.

What surprises Trefflich is the steady demand for snakes which the customers keep in aquariums in their living rooms. One boy about 12 came in recently and paid a dollar down and a dollar a week to acquire a ball python which would coil up in his hand.

But most pet snakes are bought by women, and Trefflich says, "Don't ask me why: that's something for the psychiatrists to figure out!" Baby boa constrictors, which are cute if your tastes run in that direction, can be had for $15 and up. The ladies usually sell them when they get to be three or four feet long, but there is one woman on record who kept hers until it attained a length of fifteen feet. And then she wondered why her friends didn't come around any more!

A boa, just arrived from South America, gave birth to 30 wiggling offspring in the window of a pet shop in Tampa, Florida, last March. The happy event scared the hell out of several monkeys but proved very profitable for the proprietor.

And in Chicago recently a six-foot bull snake was cited in a divorce action. The pet belonged to Emil Van Horn, night club specialty dancer. He allegedly hit his wife in the head with it when she refused to make the snake a third party to their adagio routine!

Then there's the cottonmouth-collector down South who picked up the wigglers with his bare hands, three and four at a time—until he was discouraged by a near-fatal bite from one of them.

And speaking of injuries, many pet oddities turn up for treatment at the Speyer Hospital for Animals in Manhattan.

The most famous patient was Skippy, the marmoset, a tiny species of ring-tailed monkey, belonging to Ivan Sanderson. Skippy has appeared regularly on radio and television programs with his master, a well-known naturalist, globe-trotter and lecturer.

A painful sty under his right eye made Skippy irritable as all get-out. He chattered a blue streak and tried to sink his needle-

[Continued on page 185]

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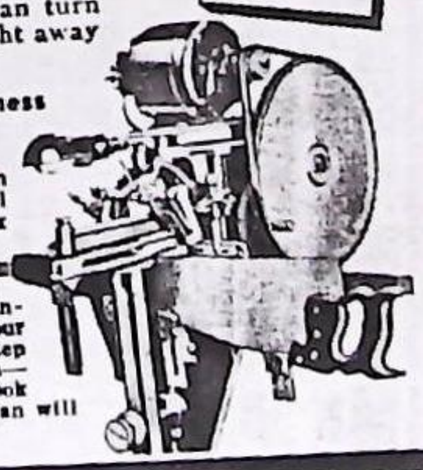

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It's A Pet-Crazy World

[Continued from page 183]

sharp fangs into anyone who approached him. After his condition was soothed by a minor operation and some salve, he was again his normal friendly self.

More than one skunk—the animal variety, that is—has submitted to checkups and treatment at the Speyer institution.

Proud skunk owners claim their pets beat dogs for intelligence and kittens for playfulness. While most of those in captivity have had their musk glands removed, they still can drive away unwelcome callers with a threatening wave of the tail. Most skunks that become domesticated were abandoned by their mothers while very young. The baby stinkers make themselves right at home in a litter of kittens.

Adult skunks are a bit harder to handle, as August Neubauer, a county agent of Virginia, Minnesota, will testify.

Neubauer didn't cage his unusual pet but let it run in the woods and fields. At supper-time each evening without fail the polecat would show up for a square meal. One night there were no scraps left at the dinner table —nothing to provide a handout for the polecat, waiting impatiently on the back porch. Neubauer went to the door and tried to explain the situation. His dumb animal pal took the attitude that actions speak louder than words. He did an about-face, hoisted his bush of a tail, and. . . .

Well, that was the end of a beautiful friendship! •

Fish Bait

[Continued from page 175]

impossible to raise or buy enough bait to meet the demand. Local customers tell out-of-state customers, tourist tell the folks back home, and so it goes. One of my biggest headaches is having to refuse to sell bait: I feel obligated to supply local customers, yet I keep standing orders from outsiders for more bait than I can produce.

There's no reason, of course, why a beginner can't start out on a small scale with just a few worms. One distinct advantage of such a gradual beginning is that you can experiment and not lose your shirt.

As far as I know there are no bugaboos of disease or uncontrolled physical conditions or legal red tape to wreck the bait business. I haven't had any such trouble, nor have I heard of difficulty on the part of other producers. It's clear sailing ahead if you want to give it a try. •

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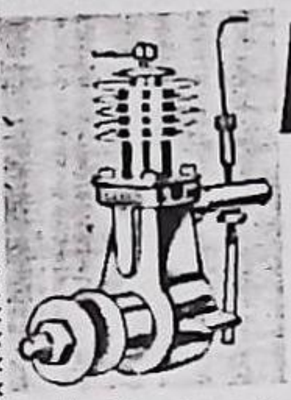

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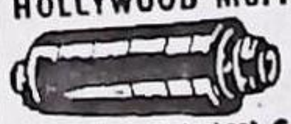

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